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REGULATION 9

FORM 1
543089

COMMONWEALTH OF AUSTRALIA

PATENTS ACT 1952-1979

APPLICATION FOR A STANDARD PATENT

I, HENRICUS JOHANNES VAN RYSWYK, of 3 Wigram Road,
Glebe, in the State of New South Wales, Commonwealth of
Australia, hereby apply for the grant of a standard patent
for an invention entitled:-

COMPLETE AFTER PROVISIONAL SPECIFICATION No. 80253/81
"METHOD OF MAKING ARTICLES COMPRISING TWO
COMPONENTS HINGED ONE TO THE OTHER"

which is described in the accompanying Provisional Specification.

My address for service is:-

SHELSTON WATERS,

55 Clarence Street,

SYDNEY. N.S.W. 2000.

DATED this 4th day of March, 1981.

HENRICUS JOHANNES VAN RYSWYK

Robert. G. Shelston

Fellow Institute of Patent Attorneys of Australia
of SHELSTON WATERS

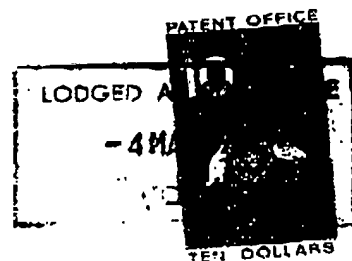
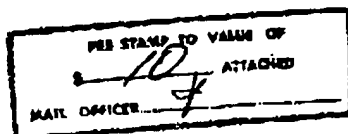
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(NON-CONVENTION—One or More Foreign)**FORM 7—REGULATION 12 (1)****COMMONWEALTH OF AUSTRALIA****PATENTS ACT, 1952-1969****DECLARATION IN SUPPORT OF AN
APPLICATION FOR A PATENT**

FEE STAMPS

(a) Here insert the
Full Name of
Applicant(s).In support of the Application made by (a)
HENRICUS JOHANNES VAN RYSWYK(b) Here insert Title
of Invention.

for a patent for an invention entitled:

(b) **"METHOD OF MAKING ARTICLES COMPRISING TWO
COMPONENTS HINGED ONE TO THE OTHER"**(c) Here insert (in
full) Address(es).(c) **HENRICUS JOHANNES VAN RYSWYK**of (c) **3 Wigram Road, Glebe, New South Wales 2037**

do solemnly and sincerely declare as follows:

1. I am/~~We~~ are the Applicant(s) for the Patent.
2. I am/~~We~~ are the actual Inventor(s) of the invention (or, where a person other than the Inventor is the Applicant).

(d) Here insert full
Name(s) and
Address(es) of Actual
Inventor(s) if
other than Applicant(s).

2. (d)

_____ is/are
the actual Inventor(s) of the invention and the facts upon which I am/we are entitled
to make the Application are as follows:

~~I am/We are the Assignee(s) of the said Inventor(s).~~

DECLARED at Sydney
this twentieth day of February 1981

(e) Signatures of
Applicant(s).

(e)

To THE COMMISSIONER OF PATENTS.

34 39

FORM 10

COMMONWEALTH OF AUSTRALIA

PATENTS ACT 1952-69

COMPLETE SPECIFICATION

FOR OFFICE USE:

Class

Int. Class

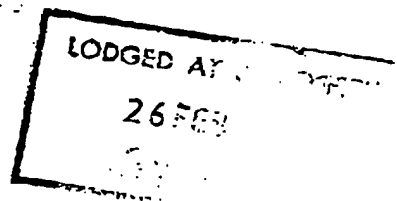
Application Number:
Lodged:

80953/82

Complete Specification Lodged:
Accepted:
Published:

Priority:

Related Art:



Name of Applicant: HENRICUS JOHANNES VAN RYSWYK

Address of Applicant: 34 View Street, Annandale, 2038, New South Wales,
Commonwealth of Australia. (formerly of 3 Wigram Road
GLEBE, N.S.W. 2037)

Actual Inventor: HENRICUS JOHANNES VAN RYSWYK

Address for Service: Shelston Waters, 163 Clarence Street, Sydney
55Complete Specification for the Invention entitled: "METHOD OF MAKING ARTICLES COMPRISING
TWO COMPONENTS HINGED ONE TO THE OTHER"The following statement is a full description of this invention, including the best method of performing it
known to me/us:—
CAP of PE7843 dated 4.3.81.

This invention relates to the manufacture of articles comprising two components which are hinged together. More particularly, it relates to such articles wherein the components have hitherto each been furnished with two, spaced-apart, substantially parallel lugs disposed so that the inwardly facing surfaces of the lugs of one component embrace and make substantial sliding contact with the outwardly facing surfaces of the lugs of the other component with a hinge pin extending through the four lugs.

10. Typical of such components are sheet metal pressings as used, for example, in toggle latches. Indeed, the invention was devised primarily with the manufacture of toggle latches in mind and is described hereinafter as related to that purpose, however it will be appreciated that it is applicable generally to all sheet metal components which require to be hinged together by means of co-acting pairs of lugs thereon.

A toggle latch of the kind in question comprises a mounting piece, a lever hinged upon the mounting piece and a pull link hinged upon the lever.

- 20 The mounting piece may comprise a body plate pierced by one or more holes to enable it to be secured flatly to a container wall or the like and two substantially parallel tabs or lugs projecting perpendicularly from the body plate at one end thereof.

The lever may comprise a channel-sectioned bar with projecting lugs at one end, being extensions of the channel flanges. Hitherto the body plate and the lever have been hinged together by means of a hinge pin extending through

their lugs so that the lever may be swung from an unlatched position wherein the web of the channel is in the same plane as the body plate to a latched position wherein the body plate is embraced by the channel flanges.

The pull link may be a hook or a wire stirrup or yoke pivotally mounted on the lever to be moved substantially longitudinally of itself when the lever is swung from its unlatched position to its latched position. The link is adapted to engage a projection on a container lid or the like and the arrangement is such that when the lever is in said unlatched position the link is free to be engaged over or withdrawn from the projection and when the lever is swung to its latched position the link is drawn into firm engagement with the projection.

Usually the pivotal connection between the link and the lever is carried across the line of action connecting the point of contact of the link with the projection and the hinge axis of the lever with an "over-centre" or "toggle" action to keep the latch closed until the lever is manually swung into the unlatched position.

Thus prior known toggle latches have comprised four components namely the mounting piece, the lever, the hinge pin and the pull link. Furthermore, their manufacture has necessitated an assembly operation wherein the lugs on the mounting piece and lever are brought into alignment, the hinge pin is positioned through the clearance holes in the lugs and then its ends are rivetted over or otherwise conditioned to maintain it permanently in place.

In view of the foregoing an object of the present invention is to reduce the manufacturing cost of toggle latches by eliminating the hinge pin and the aforesaid assembly operation.

The invention consists in a method of making two components hinged together comprising the steps of forming two, parallel, spaced-apart co-directed lugs on one component, forming two, co-planar, oppositely directed lugs on the other component, forming clearance holes in two of said lugs, forming projections on the other two of said lugs, and folding said co-planar lugs towards each other to embrace said co-directed lugs and bring said projections respectively into said clearance holes.

According to preferred embodiments of the invention the projections are so called punch-formed extrusions.

By way of example an embodiment of the invention is described in more detail hereinafter with reference to the accompanying drawings:

Figure 1 is a perspective view of two components of a toggle latch made in accordance with this invention,

Figure 2 is a plan view thereof,

Figure 3 is a side view thereof,

Figure 4 is a cross-section along the line 4-4 in Figure 3 drawn to a larger scale, and

Figure 5 is a plan view of two strips of workstock showing the effect of successive press-forming steps thereon during the manufacture of two components by a method according to the invention.

According to said embodiment the two components in

question are the mounting piece 11 and lever 12 of a toggle latch. The components are press-formed simultaneously by a phased die from separate strips of workstock fed intermittently into opposite ends of the die simultaneously.

After each pressing operation each strip is advanced a distance equal to the length of the respective components and the final operation joins the two components together and simultaneously cuts them from their strips so that it is produced as a finished, that is to say hinged together, item,
10 directly from the die.

The phases in respect of the first component 11, that is to say, mounting piece, comprise a first phase 1B and second phase 2B which serve only to move the strip in step with the second strip. In phase 3B the strip side edges are profiled to provide a body plate with two lugs 13 projecting in opposite directions in the plane of the plate and the lugs and body plate are pierced with clearance holes 14. In the fourth phase 4B the two lugs 13 are folded about parallel lines at their bases so that they then project
20 perpendicularly from the body plate with their clearance holes in alignment.

In the first phase 1A in respect of the second component 12, namely the lever, the workstock is pierced with two small diameter punches to produce small diameter holes 16 in the strip at positions where ultimately projections will be formed. In the second phase 2A an extruding punch produces two small spigot type projections 17 from the material surrounding the small diameter holes produced in the first phase and at the same time the strip is pierced with further

holes 18 for later accommodation of the ends of a wire pull-link in the form of a wire stirrup. The third phase 3A in respect of this component is to profile its side edges. The fourth phase 4A further profiles the side edges to finish forming the lugs 19.

10 The final phases 5A and 5B respectively for each component is to fold the edge lugs 19 of the second component 12 about parallel longitudinally extending lines to convert the component into a channel-sectioned piece and to bring its lugs 19 into close contact with the outer surfaces of the lugs 13 of the first component with the respective projections 17 then extending through the clearance holes 14 in the first component lugs. At the same time the two components are severed from the work strips to come away when the die is opened as a completed assembly.

It will be appreciated that in other embodiments the clearance holes and co-acting extrusions may be interchanged between the respective components.

THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:-

1. A method of making two components hinged together comprising the steps of forming two, co-planar, oppositely directed lugs on one component and two, parallel, spaced-apart co-directed lugs on the other component, forming clearance holes in two of said lugs, forming protrusions on the other two of said lugs and folding said co-planar lugs towards each other to embrace said co-directed lugs and bring said projections respectively into said clearance holes.

2. A method of manufacture as defined in claim 1 for manufacturing toggle latches of the type having a base plate and a separate lever portion comprising performing the following sequential steps on a strip of workstock to form a lever portion;

piercing extrusion holes, extruding said holes and piercing other holes for wire-link, cutting outside shape, forming over lugs of base plate and cutting off while at substantially the same time performing the following sequential steps on another strip of workstock to form a base plate;

10 piercing holes for clearances and cutting outside shape, forming lugs, uniting with lever portion and cutting off.

3. A method of manufacture as defined in claim 1 wherein the two components are press-formed simultaneously by a phased die from separate strips of workstock fed intermittently into opposite ends of the die simultaneously.

4. A method as defined in claim 3 wherein the final operation joins the two components together directly from a phased die.

5. A method as defined in claim 1 wherein the two components are the base plate and lever portion of a toggle latch respectively.

6. A method as defined in claim 1 wherein said projections are punch-formed extrusions.

7. A method of manufacture substantially as defined herein with reference to the accompanying drawings.

8. Two hingedly connected components when made by a method according to any one of the preceding claims.

DATED this 25th day of February 1982.

HENRICUS JOHANNES VAN RYSWYK

Attorney: ROBERT G. SHELSTON

Fellow Institute of Patent Attorneys of Australia
of SHELSTON WATERS

80 953/82

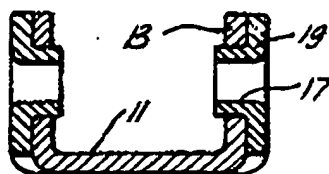


FIG. 4.

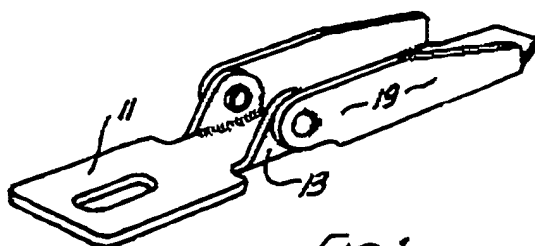


FIG. 1

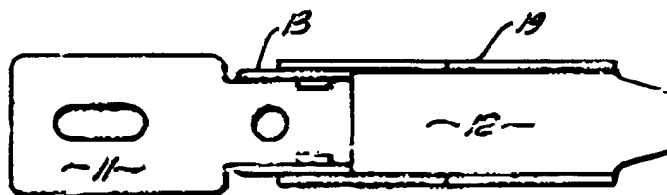


FIG. 2

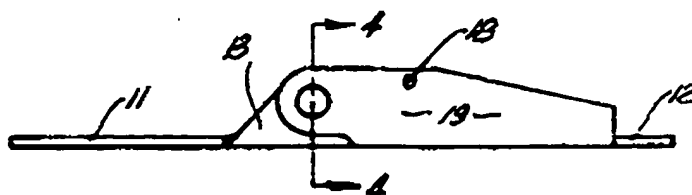
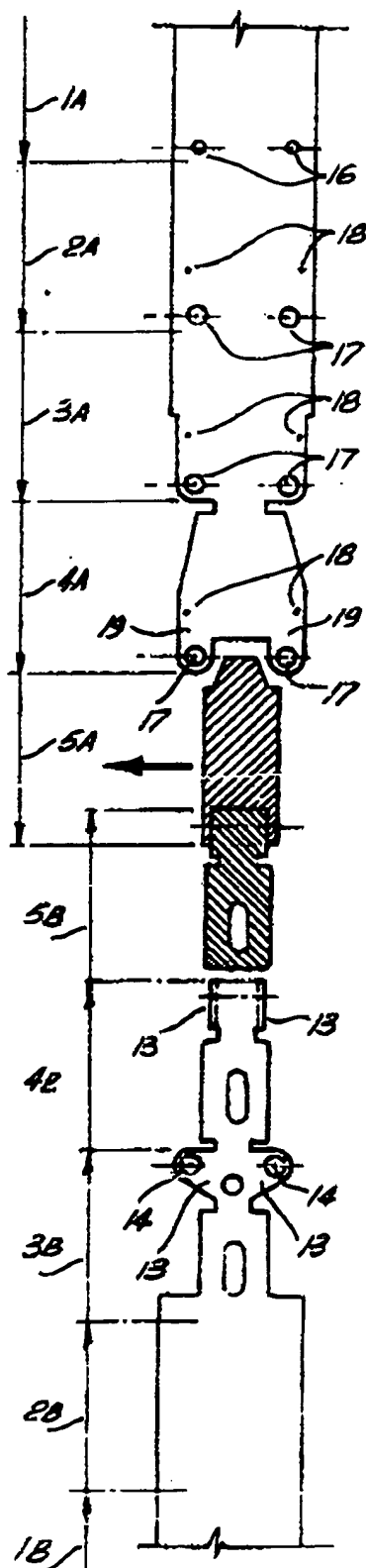


FIG. 3



80 953/82



(12) AUSTRALIAN PATENT ABRIDGMENT
(19) AU

(11) AU-B-80953/82

(54) MAKING TWO COMPONENTS HINGED TOGETHER
(75) HENRICUS JOHANNES VAN RYSWYK
(21) 80953/82 545089 (22) 4.3.81
(23) 26.2.82 (24) 4.3.81
(43) 9.9.82 (44) 27.5.85
(51)³ B21D 39/03 B21D 53/36 B21D 53/40
(74) SW
(57) Claim

1. A method of making two components hinged together comprising the steps of forming two, co-planar, oppositely directed lugs on one component and two, parallel, spaced-apart co-directed lugs on the other component; forming clearance holes in two of said lugs, forming protrusions on the other two of said lugs and folding said co-planar lugs towards each other to embrace said co-directed lugs and bring said projections respectively into said clearance holes.

ESTUDIO COLMENARES

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Our Ref.:18-646
Your Ref.: Case 68Date: December 23, 2003
By fax only : 001 631 549 0404Attn.: Mr. Michael J. Striker**RE : JOHN K. JUNKERS**
Peruvian Application No. 000152/1996-OIN (Patent No. 001314)

Dear Sirs,

We acknowledge receipt and thank you for your fax-note dated December 23, 2003.

Please take note that due to a recent Government provision all the public entities, including the Trade Mark Office have closed their offices as from December 15, 2003 to January 2, 2004 inclusive.

In view of the above-mentioned, all kind of applications, deadlines etc. included within said period will be postponed until after January 2, 2004.

Therefore, the payment of annuities will be filed after January 2nd, 2004.

Sincerely yours,

ESTUDIO COLMENARES

LGF/ent

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